Remarks

Claims 1-22 and 48-69 are pending in this application.

Claims 23-47 have been cancelled without prejudice.

Applicants affirm the prior election of species "A" (claims 1-22). Since no claims generic to all of the species are present, the claims to species "B" (claims 23-26) and species "C" (claims 33-47) have been cancelled.

New claims 48-69 have been added. These claims generally correspond to claims 1-22, except they specifically relate to rolls of uncreped throughdried tissue.

A clean version of the pending claims is attached and made a part hereof.

Directing attention to the grounds for rejection, claims 1-6 and 21-22 stand rejected under 35 U.S.C. 102(b) and anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 5,356,364 to Veith et al. Veith et al. pertains to a method of embossing creped tissue sheets using unmatched embossing elements. It is asserted that Veith et al. discloses rolls of tissue having a roll firmness of about 6 mm and a roll bulk of 12 cc/gram or greater as claimed by Applicants, citing col.2, lines 8-10 and Figure 8A of Veith et al. However, at col. 2, lines 8-10, Veith et al. does not disclose anything specific about roll firmness. This paragraph merely states that it is preferable to have high roll bulk values of about 12 cc. or greater per gram. Figure 8A illustrates the effect of two different kinds of embossing on the resulting roll firmness for a creped throughdried sheet. As illustrated, the embossing method of Veith et al. does not decrease the roll firmness as does conventional matched steel embossing. However, Figure 8A does not illustrate attaining a roll of tissue having a roll bulk above 10.3. The graph shown extrapolates the line out to a roll bulk value of 11.3, but there is no teaching that the high roll firmness value of about 0.20 inch would hold all the way out to a roll bulk value of 16 cc. or greater per gram as claimed by Applicants. Hence, there is no teaching in Veith et al., nor is it obvious, that one could attain the combination of very high bulk and very high firmness values claimed by Applicants. Therefore the rejection of claims 1-6 and 21-22 based on Veith et al. is believed to be improper.

Claims 1-22 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 5,672,248 to Wendt et al. Wendt et al. teaches a method of making high bulk uncreped throughdried tissues useful for roll products. However, it is not inherent in the teachings of Wendt et al. to attain the combination of high bulk and high firmness as claimed by Applicants. In this regard the Examiner's attention is drawn to page 1 of Applicants' specification. As described, the products of uncreped throughdried processes such as those described in Wendt et al. provide tissue sheets having very high bulk. But because these

sheets have a tendency to nest with each other within the roll, when tightly wound the resulting roll will have a relatively small diameter for a given number of sheets and therefore low roll bulks, albeit high roll firmness. On the other hand; if the winding process being used is set to achieve a particular roll diameter, which is often the case in commercial settings, high bulk sheets that tend to nest end up with space between them. This provides a high roll bulk, but the firmness is very low. This latter situation is illustrated in Example 14 of Applicants' specification and was used as the control for comparison to Applicants' invention. As illustrated in Example 14, the resulting roll had reasonably high roll bulk (17.0 cc/gram), but the roll firmness was poor (10.4 millimeters). As described in Applicants' specification, Applicants discovered new papermaking fabrics which, when used in a process such as that disclosed by Wendt et al., reduce the nesting tendency of the sheet and therefore enable the tissue sheets to be wound into rolls having not only very high roll bulk, but also good roll firmness. This combination is not inherent in the method of Wendt et al. and is also not obvious.

Claims 1-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Wendt et al. in view of Veith et al. It is suggested that all of Applicants' claimed properties, except for the high roll firmness values, are disclosed or inherent in rolls of tissue made in accordance with the teachings of Wendt et al. It is further suggested that since Veith et al. teaches rolls of tissue having high roll firmness, and since the tissues of Wendt et al. and those of Veith et al. are similar tissues, it would be obvious to one of ordinary skill in the art that the tissues of Wendt et al. would have the same roll firmness as the tissues of Veith et al.

However, it has been shown, as discussed above, that uncreped throughdried tissues made in accordance with Wendt et al. (Applicants' Example 14) do not inherently possess Applicants' claimed combination of high roll bulk and high roll firmness. Therefore, the premise of the rejection is clearly incorrect. Furthermore, uncreped throughdried tissues made in accordance with the teachings of Wendt et al. have a very high bulk to begin with. It would not be obvious to emboss such sheets using the embossing method of Veith et al. which, as disclosed in Figure 8A, results in a roll of tissue having a roll bulk in the range of 7.3 to 10.3. In comparison, Wendt et al. discloses uncreped throughdried tissue sheets having bulks in the range of about 13 to about 20 cubic centimeters per gram right off the machine. Although roll bulk values are not given by Wendt et al., one would expect the roll bulk values to be quite high, as evidenced by Applicants' Example 14. However, it would not be obvious to subject a sheet that produces a roll bulk of about 17 to an embossing process that is taught to increase the roll bulk to a range of only 7.3 to 10.3, which is well below the starting bulk of an uncreped throughdried sheet. Therefore it is believed that this combination rejection is improper.

For all of the foregoing reasons, it is believed that this application is now in condition for allowance and such action is earnestly solicited.

Please charge any prosecutional fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at: (920) 721-3616.

Respectfully submitted,

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CERTIFICATE OF MAILING

I, Judy Garot, hereby certify that on February 6, 2002 this document is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By: _____

Judy Garot

Clean Version Of Pending Claims

1. A roll of tissue having a roll bulk of 16 cubic centimeters or greater per gram and a roll firmness of 8 millimeters or less.

2. The roll of tissue of claim 1 wherein the roll firmness is about 7 millimeters or less.

3. The roll of tissue of claim 1 wherein the roll firmness is about 6 millimeters or less.

4. The roll of tissue of claim 1 wherein the roll firmness is from about 4 to about 7 millimeters.

5. The roll of tissue of claim 1 wherein the roll bulk is about 17 cubic centimeters or greater per gram and the roll firmness is about 6 millimeters or less.

6. The roll of tissue of claim 1 wherein the roll bulk is from about 17 cubic centimeters per gram to about 20 cubic centimeters per gram and the roll firmness is from about 4 millimeters to about 7 millimeters.

7. A roll of tissue having a roll bulk/roll firmness ratio of 20 or more square centimeters per gram and a single sheet caliper of from about 0.02 to about 0.05 inch.

8. The roll of tissue of claim 7 wherein the roll bulk/roll firmness ratio is about 25 or more square centimeters per gram.

9. The roll of tissue of claim 7 wherein the roll bulk/roll firmness ratio is from about 25 to about 55 square centimeters per gram.

10. The roll of tissue of claim 9 wherein the single sheet caliper is from about 0.025 to about 0.040 inch.

11. A roll of tissue having a roll bulk/roll firmness ratio of 20 or more square centimeters per gram and a geometric mean stiffness of about 8 or less.

12. The roll of tissue of claim 11 wherein the roll bulk/roll firmness ratio is about 25 or more square centimeters per gram.

13. The roll of tissue of claim 11 wherein the roll bulk/roll firmness ratio is from about 25 to about 55 square centimeters per gram.

14. The roll of tissue of claim 13 wherein the geometric mean stiffness is about 5 or less.

15. The roll of tissue of claim 13 wherein the geometric mean stiffness is from about 2 to about 5.

16. A roll of tissue having a roll bulk/roll firmness/single sheet caliper ratio of about 350 or more centimeters per gram and a geometric mean stiffness of about 8 or less.

17. The roll of tissue of claim 16 wherein the roll bulk/roll firmness/single sheet caliper ratio is about 390 or more centimeters per gram.

18. The roll of tissue of claim 16 wherein the roll bulk/roll firmness/single sheet caliper ratio is about 430 or more centimeters per gram.

19. The roll of tissue of claim 16 wherein the roll bulk/roll firmness/single sheet caliper ratio is from about 350 to about 550 centimeters per gram.

20. The roll of tissue of claim 19 wherein the geometric mean stiffness is from about 2 to about 5.

21. The roll of tissue of claim 1, 7, 11 or 16 wherein the tissue has an absorbent capacity of 5 or more grams of water per gram of fiber.

22. The roll of tissue of claim 1, 7, 11 or 16 wherein the tissue has an absorbent rate of about 4 seconds or less.

Claims 23-47 are cancelled.

48. (New) A roll of uncreped throughdried tissue having a roll bulk of 16 cubic centimeters or greater per gram and a roll firmness of 8 millimeters or less.

49. (New) The roll of tissue of claim 48 wherein the roll firmness is about 7 millimeters or less.

50. (New) The roll of tissue of claim 48 wherein the roll firmness is about 6 millimeters or less.

51. (New) The roll of tissue of claim 48 wherein the roll firmness is from about 4 to about 7 millimeters.

52. (New) The roll of tissue of claim 48 wherein the roll bulk is about 17 cubic centimeters or greater per gram and the roll firmness is about 6 millimeters or less.

53. (New) The roll of tissue of claim 48 wherein the roll bulk is from about 17 cubic centimeters per gram to about 20 cubic centimeters per gram and the roll firmness is from about 4 millimeters to about 7 millimeters.

54. (New) A roll of uncreped throughdried tissue having a roll bulk/roll firmness ratio of 20 or more square centimeters per gram and a single sheet caliper of from about 0.02 to about 0.05 inch.

55. (New) The roll of tissue of claim 54 wherein the roll bulk/roll firmness ratio is about 25 or more square centimeters per gram.

56. (New) The roll of tissue of claim 54 wherein the roll bulk/roll firmness ratio is from about 25 to about 55 square centimeters per gram.

57. (New) The roll of tissue of claim 56 wherein the single sheet caliper is from about 0.025 to about 0.040 inch.

58. (New) A roll of uncreped throughdried tissue having a roll bulk/roll firmness ratio of 20 or more square centimeters per gram and a geometric mean stiffness of about 8 or less.

59. (New) The roll of tissue of claim 58 wherein the roll bulk/roll firmness ratio is about 25 or more square centimeters per gram.

60. (New) The roll of tissue of claim 58 wherein the roll bulk/roll firmness ratio is from about 25 to about 55 square centimeters per gram.

61. (New) The roll of tissue of claim 60 wherein the geometric mean stiffness is about 5 or less.

62. (New) The roll of tissue of claim 60 wherein the geometric mean stiffness is from about 2 to about 5.

63. (New) A roll of uncreped throughdried tissue having a roll bulk/roll firmness/single sheet caliper ratio of about 350 or more centimeters per gram and a geometric mean stiffness of about 8 or less.

64. (New) The roll of tissue of claim 63 wherein the roll bulk/roll firmness/single sheet caliper ratio is about 390 or more centimeters per gram.

65. (New) The roll of tissue of claim 63 wherein the roll bulk/roll firmness/single sheet caliper ratio is about 430 or more centimeters per gram.

66. (New) The roll of tissue of claim 63 wherein the roll bulk/roll firmness/single sheet caliper ratio is from about 350 to about 550 centimeters per gram.

67. (New) The roll of tissue of claim 66 wherein the geometric mean stiffness is from about 2 to about 5.

68. (New) The roll of uncreped throughdried tissue of claim 48, 54, 58 or 63 wherein the tissue has an absorbent capacity of 5 or more grams of water per gram of fiber.

69. (New) The roll of uncreped throughdried tissue of claim 48, 54, 58 or 63 wherein the tissue has an absorbent rate of about 4 seconds or less.